



# Never Get Tired of the Little Things

## The African Dwarf Mud Turtle, *Pelusios nanus*, in the Wild and Captivity

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An adult Amazonian Toad-headed turtle exploring its enclosure.

Samuel Johnson, the 18th century English writer, once wrote, “There is nothing, Sir, too little for so little a creature as man. It is by studying little things that we attain the great art of having as little misery and as much happiness as possible.” For turtle keepers, considering the small things can certainly be rewarding. Many consider size as great a factor as any when determining which species best fits plans for captive breeding programs, with good reason.

Recently, the African Dwarf Mud Turtle, *Pelusios nanus*, has begun being imported to the United States, making it one of the newer species in captivity here. As is it still a relatively new species to science, this turtle has never been a well-known, or even widely accepted species. There is very limited information regarding *Pelusios nanus*, both in captivity and in the wild. Until recently, the natural history and care of this species has been assumed to be similar to that of *P. adansonii*.

The small size of *Pelusios nanus* makes it an instant source of intrigue for many Western hobbyists. Although most turtles benefit from more space, especially in captivity, most keepers work with limited resources. For that reason, the diminutive and unique *P. nanus* cannot be ignored. I first saw this species in a Bonin’s *Turtles of the World*, and was immediately drawn to the small adult size and endearing face of the species. Imagine my excitement when I first saw the species offered for sale. The initial asking prices, although fair for a species virtually never offered for sale, were pretty substantial, keeping me from buying them all.

This is the smallest turtle of its genus, at just 12 cm SCL in adults. This distinction earns this turtle both its common and scientific names, “dwarf” and “nanus.” The moderately sized head of *Pelusios nanus* has a short snout. The upper jaw is slightly

notched and there are two tubercles on the underside of the chin. The shell is elongated and oval in shape, there is no vertebral keel, and the posterior of the carapace may be slightly flared. The plastron is large, with a weak hinge and is narrow at the abdominal-femoral seam. Males display plastral concavity and are smaller than the already-miniature females. The carapace is usually a dull brown color, sometimes with faint streaks. We have seen new growth around the costal scutes in captive animals that boasts an attractive, lighter color.

Forelimbs in this species lack large transverse scales. The skin of populations originating in the Congo are reported to be a rich, yellow color. Our animals have this coloring and are reported to originate from said locale, which seems to be the case with many of the recent imports.

The natural history and wild situation of this species is poorly known. The history of the taxon, particularly regarding this species is also of note. Loveridge (1941) revised the family of *Pelomedusa*, reducing the entire genus to only four species, *Pelusios adansonii*, *P. gabonensis*, *P. subniger*, and *P. sinuatus*. Laurent (1956) added four more species to the genus, including *Pelusios nanus*, a declaration that would be rejected in the future by Wermuth and Mertens (1961). After the validity of his findings were questioned, Laurent worked to provide more convincing evidence. One method was using logarithms to decipher a multitude of measurements from animals at natural history museums from around the world.

The African Dwarf Mud Turtle, *Pelusios nanus*, was once thought to be a southern representative of *Pelusios adansonii*. Two of the strongest voices on this topic, Wermuth and Mertens (1961) thought that these two species were one and the same, though data and evidence backing these claims were lacking. Laurent (1965) examined these two species closely, finding them to be quite different from one another, from external morphology alone. The general shape and color are dislike one another. *Pelusios nanus* (12 cm) is also quite smaller than *P. adansonii* (17 cm). The differences between the width of the third and fifth vertebral scutes and the width of the intergulars also distinguish the two species.



Head and beautiful yellow skin of *Pelusios nanus*. Photo by Mary Benzenberg. Courtesy of Dennis Uhrig.

In the wild, this small turtle inhabits small bodies of water in humid savannas. *Pelusios nanus* serves the same ecological purpose in southern portions of Africa, specifically in the Zambezi, the Congo, and Angola, as its northerly relative, *P. adansonii*. Biology of *P. nanus* is very poorly known, despite their wide distribution. The species is thought to be easily overlooked in the wild, which leads to educated guesses that populations may be stable, but there is no real data backing that claim up, either. During the dry season, the population in Zambia has been found to inhabit small ponds and it is not known whether or not this particular population aestivates at that time.

We keep the aforementioned group of adult founders, as well as a handful of some of the very first captive-produced *Pelusios nanus* in the United States. The group of hatchlings has grown extremely quickly, while displaying some of the most aggressive feeding behavior imaginable. It would be hard to imagine such a small turtle running to a person for food, especially as aggressively as this species. Every morning, before most of my animals are even awake, I greatly enjoy looking on as these small turtles frantically swim/run towards me for food. In our experience, even fresh imports beg for food like adult Red Eared Sliders.



Plastron view of an adult male (left) and an adult female (right). Photo by Mary Benzenberg . Courtesy of Dennis Uhrig.

Our adult *Pelusios nanus* are kept in Rubbermaid stock tanks ranging from 50 to 150 gallons, depending on the size of the groups in which they are maintained. We have witnessed absolutely no aggression from this species, an important factor when determining best practice for assembling breeding groups and enclosure design. This species will also bask together with no signs of aggression.

We set the adults up in water that is roughly 10 inches in depth, with lots of “furniture,” like driftwood and large pieces of PVC piping. For added security, we add some floating aquatic plants like water hyacinth. The substrate in the water portion of the enclosure is rinsed play sand.

Lighting has been provided by normal incandescent bulbs for heat, and a separate bulb for UVB radiation. Temperatures in the 80s F are a nice standard, with a basking temperature in the low to mid 90s F. While warm temperatures should be maintained whenever possible, it is important to mention that this species has had their temperatures at night drop as low as 57° F overnight in my care. This is not required and extreme temperature drops should be avoided.

In the adult enclosure, it is important to provide a nesting area. Luckily, this species is so small, that common do-it-yourself techniques that have proven useful in other indoor setups for other species can be employed for this small turtle. A small tub can be suspended above the water surface, by stacking rocks, using plastic egg crate, or suspending on top of the walls of the enclosure, if it is shallow enough to keep the ramp a modest length. For substrate in the nesting area, we used a mixture of play sand and Zoo Med’s Eco Earth, which is made from coconut fiber.

Nesting for females seems to be consistent with what you would expect from other members of the genus. We recorded approximately 4 eggs in the average clutch. Successful incubation has been maintained in a warm room, without the use of an incubator, with relatively steady temperatures between 86° F and 88° F. The incubation period lasted 58 days. Gerard Siatkowski reported, “These were, straight up, the easiest turtles I’ve ever bred.”

Hatchlings are very small, which is to be expected. We set our hatchlings up in Sterilite Tubs measuring 13 5/8” L x 8 1/4” W x 4 7/8” H, with an inch or two of water, fake plants and a basking platform. There is no filtration, so water must be changed every couple days to keep the turtles healthy. That being said, I have seen



Adult *Pelusios nanus*. Photo by Kristin Bennett / Fascination Herp.

no indication that water quality is as important as with other species. Once or twice when food is not eaten, which may happen at cooler temps around the winter, the water has become a filthy green or brown color with entirely no ill effect.

For keepers or students interested in studying a species that has not been studied in great detail, this may be the animal for you. There are bigger fish to fry in the areas in which *P. nanus* occurs, where turtle biology, study, or appreciation is not putting food on the table. It can be challenging and rewarding when working with unknown species like *Pelusios nanus*, or the sympatric Zambezi Flap-Shelled Turtle (*Cycloderma frenatum*) for these reasons. Many of us cannot have experience with the large animals, like *C. frenatum*, which makes *Pelusios nanus* is the best of both worlds. Here is a chance to take notes on your turtle project that actually matter, because you may observe behaviors that have not been recorded

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yet. All this in a species that can easily be concealed in a dorm room! Those of us with limited space do not have opportunities such as this very often. 13 5/8" L x 8 1/4" W x 4 7/8" H

The recent interest in this species is not without merit. If you are finding yourself on the fence about purchasing a group, do not hesitate. There have been no concerns around the acclimation of fresh imports and all keepers working with them note their perfect disposition. They are tiny and hardy, which makes them a more suitable candidate for indoor keeping than the vast majority of turtle species available. Happiness is just a paypal transaction away if you are sure not to overlook this little turtle.

\* Thanks to Gerard Siatkowski for contributing to this article and for providing me the opportunity to work with this gratifying little turtle.

### Literature

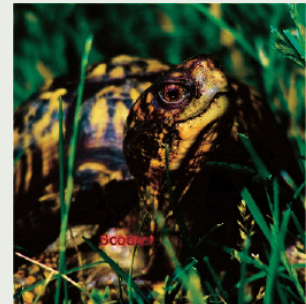
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Hatching *Pelusios nanus*. Photo by Kristin Bennett / Fascination Herp.

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